



**IEA International Energy Agency
Photovoltaic Power Systems Programme**

Task IX

**DEPLOYMENT OF PHOTOVOLTAIC TECHNOLOGIES
CO-OPERATION WITH DEVELOPING COUNTRIES**

**presentation by
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**Village Power '98
World Bank 6-8 October 1998**



IEA PVPS TASK IX Co-operation with Developing Countries

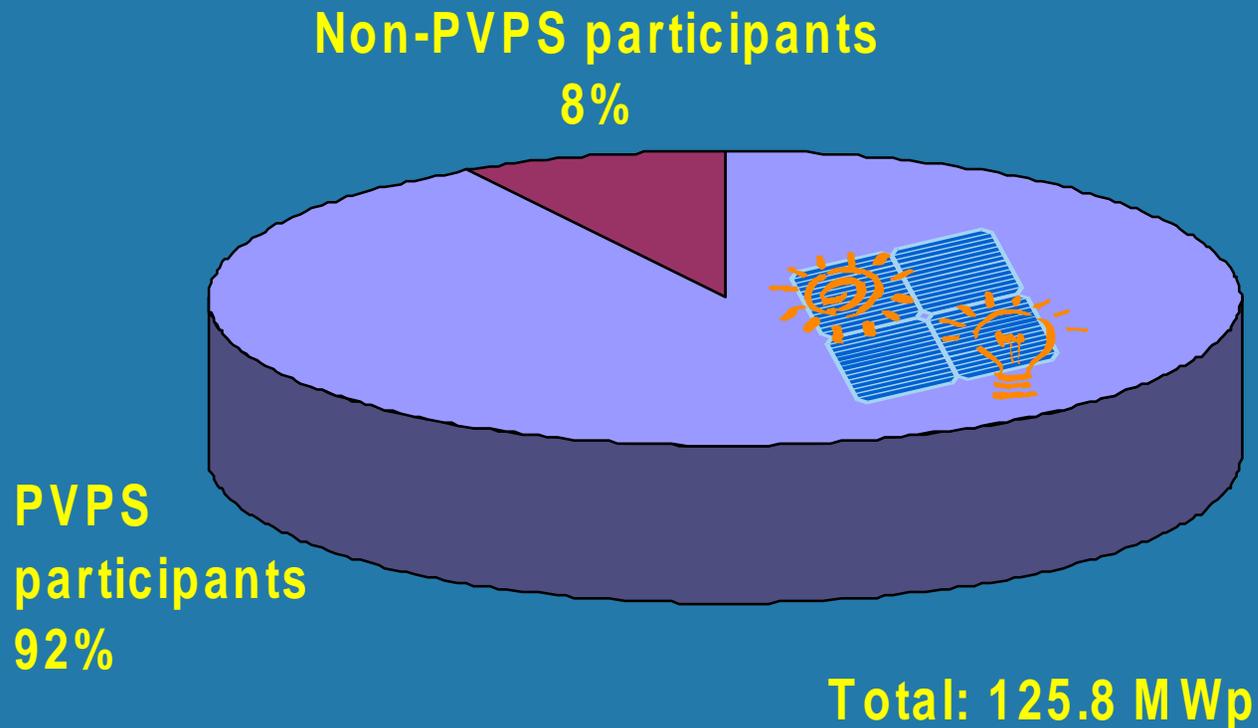
OBJECTIVE

To increase the overall rate of successful deployment of PV systems in developing countries, through increased co-operation and information exchange between bilateral and multilateral donors and the IEA PVPS Programme.

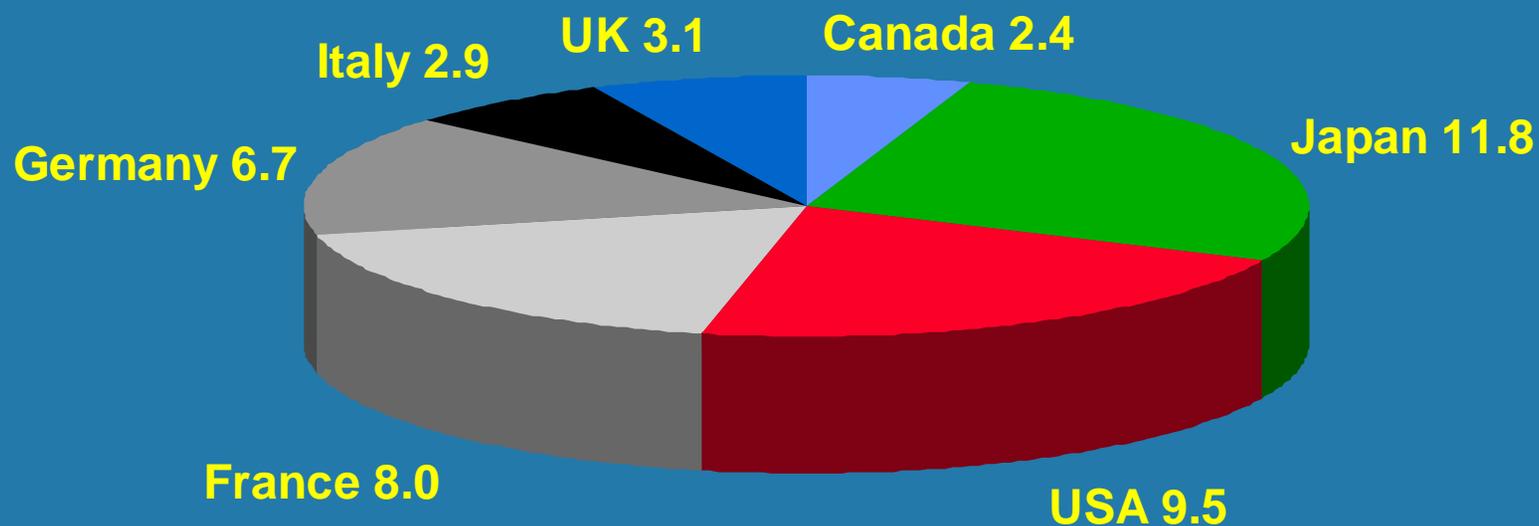
PVPS Participating Countries

- Australia
- Austria
- Canada
- Denmark
- European Union
- Finland
- France
- Germany
- Israel
- Italy
- Japan
- Korea
- Mexico
- The Netherlands
- Portugal
- Spain
- Sweden
- Switzerland
- United Kingdom
- United States

World PV Manufacture: is in PVPS Participating Countries



AID SPENDING BY THE 7 MAJOR PLAYERS (AVERAGE FOR THE LAST % YEARS) (\$BILLION)



PVPS Tasks

- I - Information Exchange
- II - Performance data-base
- III - Stand-alone systems
- V - Grid interconnection
- VI - Large-scale (multi-MWp)
- VII - Building integration
- VIII - Very large-scale (multi-GWp)
- IX - Co-operation with Developing Countries

Task IX Workshop, IT Power 1-2 October '98

- Australia
- Canada
- Denmark
- France
- Germany
- Italy
- Japan
- Sweden
- Switzerland
- The Netherlands
- UK
- USA

RATIONALE

- Enormous potential market exists, does not require dramatic PV cost reductions
- Can be developed into a sustainable commercial market and at the same time deliver basic services, health care, water supply, contribute to poverty reduction
- 92% of PV production is in PVPS member countries. Companies from these countries will be major beneficiaries
- Huge new investment in PV production by serious players which require sustainable markets, or investments will be cancelled. Industry welcomes enhanced international co-operation.
- Financial resources required exist in PVPS member countries - *Official Development Assistance* (ODA) is more than \$50 billion/year
- PVPS will use its expertise and status to bring together the consumers, PV industry and the financial resources required for widespread MARKET DEPLOYMENT

MOTIVATION

- PVPS Implementing Agreement has the overall mission to assist PV to become a significant energy option, through international collaboration
- PV could become a significant energy option in those areas of the world (developing countries) which have a demand for new sources of electricity, before areas which already have reliable and low-cost electricity supplies
- PV is already economic for small individual supplies in developing countries. 2 billion plus people without electricity and unlikely to receive grid supplies is an enormous potential market
- IEA has announced a policy of increased co-operation with Developing Countries
- Task IX will provide the framework for PV co-operation

Traditional PV Co-operation

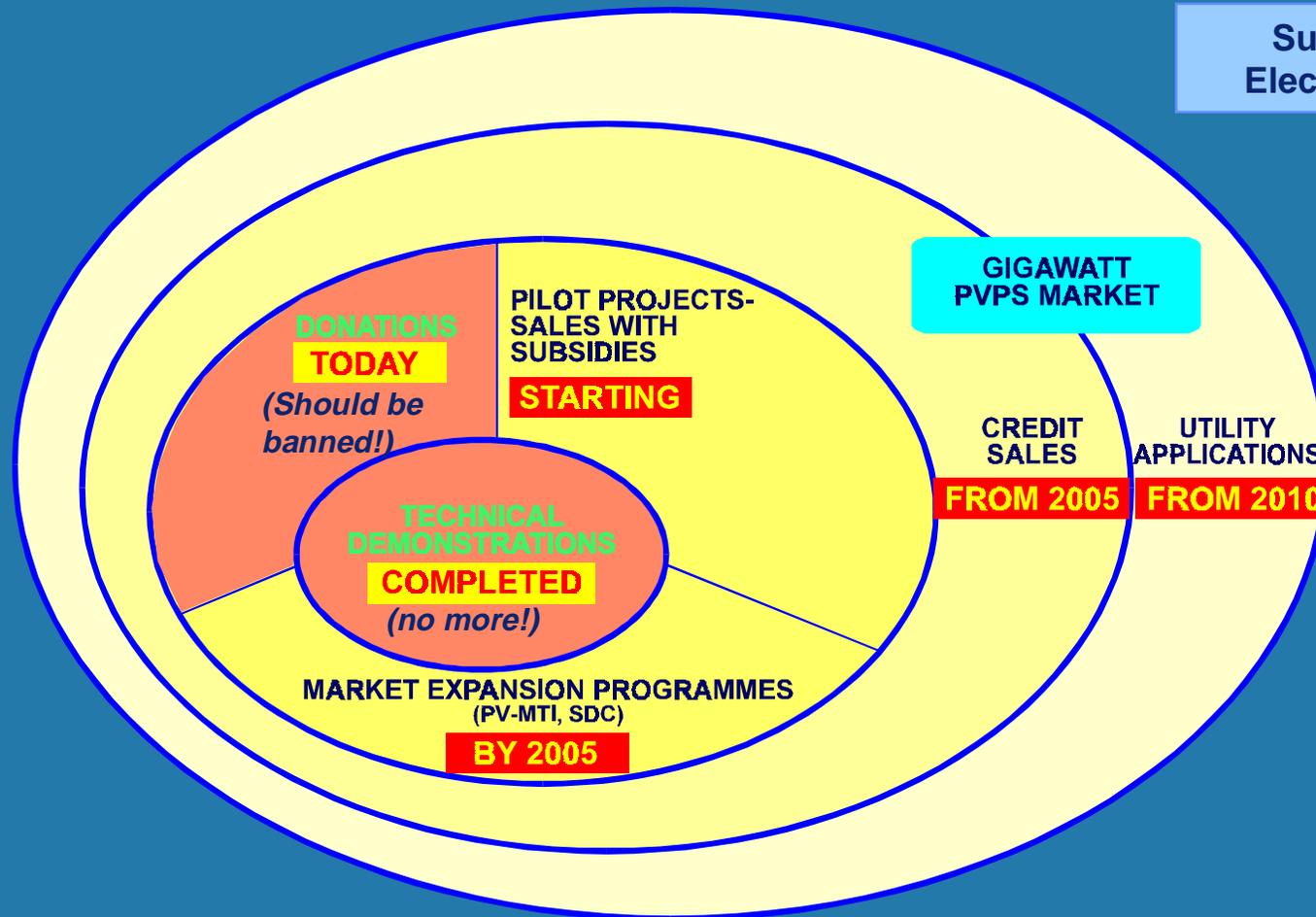
Developing Country	+ Science Ministry	+ Donor	= joint research, demonstrations, studies. <u>NO</u> SUSTAINABLE MARKET BUILDING
Developing Country	+ Donor		= demonstrations, lotsa studies. <u>NO</u> SUSTAINABLE MARKET BUILDING
Developing Country	+ Donor	+ PV Manufacturer	= more hardware, less studies. <u>NO</u> SUSTAINABLE MARKET BUILDING
Developing Country	+ Donor	+ Consultant	= even more studies. <u>NO</u> SUSTAINABLE MARKET BUILDING

Results of traditional PV Co-operation

- **Studies, more studies and even more studies**
- **Demonstrations, often of unproven systems (ie, “flemonstrations”)**
- **Demonstrations without market building**
- **Lots of person-years of management, study, research, record PhD/MWp**
- **Few MWp of PV**

PV MARKET DEPLOYMENT STRATEGY

Sustainable Markets in
Electricity-Deficient Areas



SUBTASKS

SubTask 10: Deployment infrastructure

Contribute to overcoming the critical barrier to large-scale PV deployment - lack of infrastructure - recommended practice guides

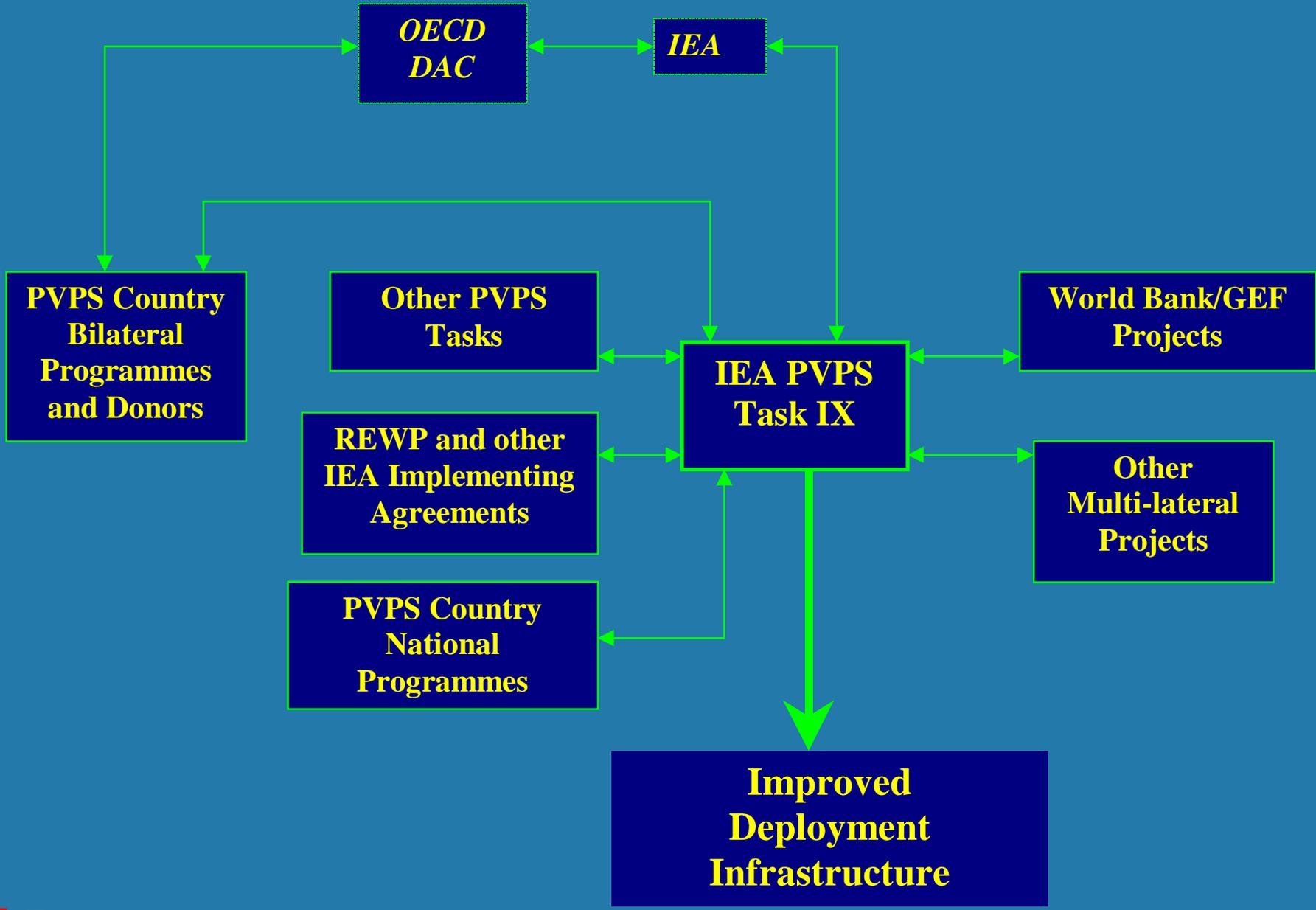
SubTask 20: Support and Co-operation

Facilitate the flow of information to international agencies & others outside PVPS

Special professional workshops to catalyse projects and programmes.

SubTask 30: Techno-economic aspects of PV in developing countries

Investigate the technical and economic aspects for feeding technical information to other PVPS Tasks



TIMETABLE

	Preparation		Task Duration					
	1997	1998	1999	2000	2001	2002	2003	2004
DC Team	█	█	█	█				
Task Proposal		█	█	█				
Preparatory Meeting			█					
Draft Annex		█	█					
Final Annex, Global Work Plan		█	█	█				
Annex Approval by ExCo			█	█				
National Task Approval			█	█	█			
First Task IX Meeting				█				
SubTask 10				█	█	█	█	█
SubTask 20				█	█	█	█	█
SubTask 30				█	█	█	█	█
Reporting, Dissemination				█	█	█	█	█

CONCLUSIONS

Co-ordination between bilateral donors and National PV Programmes will maximise the impacts of PV in developing countries, and move in the direction of sustainable commercial markets

The International Energy Agency is supporting establishment of the necessary dialogue

This will deliver benefits to both the PV companies and the people of the developing world at one and the same time